Southern H Occupancy Workgroup Comments:

- Do not make this "H" an appendix section. Put the section into the body of the code identifying them appropriately, such as a Section 415.10
- Section 103 puts allowable quantities into a text format…make it a Table
- Limit this to University/College campuses only in the first paragraph or scope
- Control area concept referred to would require 2 hour separation and for Type IIA at floor 4 and above…might want to review, would have to propose an exception to 414.
- 102.7 refers to "occupancy separation" which is no longer used in the I code
- Clean up to make consistent with the I code language

APPENDIX ___

GROUP L - LABORATORIES

SECTION 101
GENERAL

101.1 Group L. This occupancy shall include buildings and structures or portions thereof, used as laboratories for scientific experimentation or research having quantities of materials not in excess of those listed in Tables 307.7(1) and 307.7(2) except as modified in this Appendix and not classified as Group B. This occupancy shall be designed and constructed in accordance with the requirements for a Group B Occupancy except as specified in this Appendix.

SECTION 102
REQUIREMENTS FOR GROUP L

102.1 Multiple Hazards. When a hazardous material has multiple hazards, all hazards shall be addressed and controlled in accordance with the provisions of this code.

102.2 Requirement for Report. The enforcing agency may require a technical opinion and report to identify and develop methods of protection from the hazards presented by the hazardous materials. A qualified person, firm, or corporation, approved by the enforcing agency, shall prepare the opinion and report, and shall be provided without charge to the enforcing agency. The opinion and report may include, but is not limited to, the preparation of a hazardous material management plan (HMMP); chemical analysis; recommendations for methods of isolation, separation, containment or protection of hazardous materials or processes, including appropriate engineering controls to be applied; the extent of changes in the hazardous behavior to be anticipated under conditions of exposure to fire or from hazard control procedures; and the limitations or conditions of use necessary to achieve and maintain control of the hazardous materials or operations. The report shall be entered into the files of the code enforcement agencies. Proprietary and trade secret information shall be protected under the laws of the state or jurisdiction having authority.

102.3 Laboratory Suite. For purposes of this Appendix the definition of a "laboratory suite" shall be the same as a "control area" as defined by the *Building Code*.

102.4 Emergency Power. An emergency power system shall be provided. The emergency power system shall be designed and installed in accordance with the Electrical Code to automatically supply power to all required electrical equipment when the normal electrical supply system is interrupted. The exhaust system may be designed to operate at not less than one half the normal fan speed on the emergency power system when it is demonstrated that the level of exhaust will maintain a safe atmosphere.

102.5 Construction Type. Buildings containing Group L Occupancies shall be of Type I or Type IIA construction.

102.6 Floor Construction. Liquid-tight floors, which comply with ASTM D 2843 (OI greater than 25) and ASTM E 84 (Class 1), shall be required. Pipe and similar penetrations shall maintain the fire-resistive and liquid-tight characteristics of the floor a minimum of 4 inches (102 mm) at the bottom of walls from the floor level.

102.7 Occupancy Separation. The interstitial space above a laboratory shall be separated from a corridor by one-hour construction. Laboratories and similar areas shall not require an occupancy separation from each other when the use of the area is determined to be compatible. Classrooms and offices directly related to the use shall not require an occupancy separation.

102.8 Fume Hood Exhaust Ducts. Fume hood exhaust ducts exposed to fire-resistive exit corridors shall be separated from the corridor by one-hour fire-resistive construction.

SECTION 103
HAZARDOUS MATERIAL RESTRICTIONS

103.1 Hazardous Material Restrictions - Floors 1, 2, 3, and 1st Basement Level. Up through the third floor and down through the first basement level, the maximum quantity of hazardous materials per laboratory suite shall comply with Tables 307.7 (1) and 307.7 (2). Quantities of materials shall not be permitted to be increased with an approved automatic sprinkler system.

103.2 Hazardous Material Restrictions - Floors 4, 5, 6, and 2nd and 3rd Basement Levels. For the fourth, fifth, sixth floors, and the second and third basement levels, the maximum quantity of hazardous materials per laboratory suite shall be reduced to 75% of those allowed by Tables 307.7 (1) and 307.7 (2). Quantities of materials shall not be permitted to be increased with an approved automatic sprinkler system.

103.3 Hazardous Material Restrictions - Floors 7 and Above, and Below 3rd Basement Level. For the seventh floor and above, and below the third basement floor level, the maximum quantity of hazardous materials per laboratory suite shall be reduced to 50% of those allowed by Tables 307.7 (1) and 307.7 (2). Quantities of materials shall not be permitted to be increased with an approved automatic sprinkler system.

SECTION 104
VENTILATION

104.1 General Ventilation. In all Group L Occupancies, exhaust streams when combined shall not create a physical hazard or react to degrade the containment material. The building official may require a technical report in accordance with Section 102.2 of this Appendix.

Fire and smoke dampers in fume hood exhaust ducts are prohibited.

Ducts from laboratory hoods and local exhaust systems shall be constructed entirely of noncombustible material.

Exceptions:

1. Flexible ducts for special local exhausts used within a laboratory work suite.
2. Combustible ducts with flame-spread index less than 75 located within a shaft of noncombustible construction where passing through areas other than the laboratory suite they serve and provided with internal fire sprinklers.
3. Combustible ducts or duct linings having a flame spread of 25 or less.

Exhaust ducts from each laboratory suite shall be separately ducted to a point outside the building, to a mechanical space or to a shaft. Connection to a common duct may occur at those points. Exhaust ducts within the same laboratory suite may be combined within that laboratory suite.

Perchloric acid hoods and exhaust ducts shall be constructed of materials that are acid resistant, nonreactive, and impervious to perchloric acid. A water-spray system shall be provided for washing down the hood interior behind the baffle and the entire duct system. Ductwork shall provide a positive drainage slope back to the hood and shall consist of sealed sections. The hood baffle shall be removable for inspection.

104.2 Ventilation Rates. Ventilation rates shall comply with the requirements of the *Mechanical Code.*

SECTION 105
SPECIAL HAZARDS

105.1 Special Hazards. Storage, handling and use of hazardous materials in Group L shall comply with the *International Fire Code*.

SECTION 106
MEANS OF EGRESS

106.1 Access to Exits. Every portion of a Group L Occupancy having a floor area of 200 square feet or more shall have access to not less than two separate exits or exit-access doors.

106.2 Travel within Rooms. Within a Group L Occupancy all portions of any room shall be within 75 feet (22 860 mm) of an exit or exit-access door from the room. The distance of travel to an exit corridor or to an exit shall not exceed 100 feet (30 480 mm).

106.3 Door Swing. All exit and exit-access doors serving areas with hazardous materials shall swing in the direction of exit travel, regardless of the occupant load served.

106.4 Panic Hardware. Exit and exit-access doors from areas with hazardous materials shall not be provided with a latch or lock unless it is panic hardware.

106.5 Horizontal Exits. Buildings containing Group L Occupancies located four or more floors above the first floor shall have each floor of the building separated with at least one horizontal exit constructed as required for a two-hour fire-resistive occupancy separation. Each side of the horizontal exit shall be provided with a separate mechanical exhaust system without interconnection. No side shall be less than 30 percent of the total area for the floor. At least one elevator shall be provided to serve the floor on each side of the horizontal exit wall and shall comply with the provisions of the *Building Code*.

SECTION 107
FIRE PROTECTION SYSTEMS

107.1 Automatic Fire Protection System. An automatic fire protection system shall be installed throughout buildings housing Group L Occupancies. Sprinkler system design for research laboratories and similar areas of a Group L Occupancy shall not be less than that required for Ordinary Hazard Group 2 with a design area of not less than 3,000 square feet (279 m2).

SECTION 108
EXISTING BUILDINGS

108.1 General. Alterations, repairs, or additions may be made to any building or structure without requiring the existing building or structure to comply with all the requirements of this Appendix, provided the addition, alteration, or repair conforms to the requirements of this Appendix.

108.2 Unsafe Condition. Alterations, repairs, or additions shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any of the provisions of this code, nor shall such alterations or additions cause the existing building or structure to become unsafe. An unsafe condition shall be deemed to have been created if an alteration or addition will cause the existing building or structure to become structurally unsafe or overloaded; will not provide adequate egress in compliance with the provisions of this code or will obstruct existing exits; will create a fire hazard; will reduce required fire resistance or will otherwise create conditions dangerous to human life.

108.3 Changes in Use or Occupancy. Any building so altered, which involves a change in use or occupancy, shall not exceed the height, number of stories and area permitted for new buildings. Any building plus new additions shall not exceed the height, number of stories and area permitted for new buildings.

108.4 Buildings Not in Compliance with Code. Alterations or additions shall not be made to an existing building or structure when such existing building or structure is not in full compliance with the provisions of this code except when such alteration or addition will result in the existing building or structure being no more hazardous, based on life safety, fire safety and sanitation, than before such additions or alterations are undertaken.

108.5 Maintenance of Structural and Fire Resistive Integrity Alterations or repairs to an existing building or structure that are nonstructural and do not adversely affect any structural member of any part of the building or structure having required fire resistance may be made with the same materials of which the building or structure is constructed.

108.6 Continuation of Existing Use. Buildings in existence at the time of the adoption of this code may have their existing use or occupancy continued if such use or occupancy was legal at the time of the adoption of this code, provided such continued use is not dangerous to life.

108.7 Automatic Fire Protection Systems. In mixed occupancies, portions of floors or buildings not classified as Group L Occupancies shall be provided with sprinkler protection designed of not less than that required for Ordinary Hazard Group 1 with a design area of not less than 3,000 square feet (279 m2).